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Obituary

Professor Emeritus

Dr. OKANO, Masaya (1920-2015)

Dr. Masaya Okano, Professor Emeritus of Kyoto University, passed away on June 8, 2015, in Ohtsu, at the age of 94.

Dr. Masaya Okano was born in Shiga on November 7, 1920. He graduated from the Department of Industrial Chemistry, Faculty of Engineering, Kyoto Imperial University in 1947 and continued his research on organic chemistry as a special graduate student under the supervision of Professor Yoshiro Ogata. In 1953, he was appointed a full-time lecturer of the Department of Industrial Chemistry, Faculty of Engineering, Kyoto University and started his academic career majoring in theoretical organic chemistry. He was conferred a doctoral degree (Doctor of Engineering) form Kyoto University in 1954 for his studies on the mechanism of organic reactions clarified by kinetics. After the promotion to an Associate Professor of the same Department in 1955, Dr. Okano joined the member of the Institute for Chemical Research, Kyoto University in 1956. In 1966, on leave from Kyoto University, he stayed at Yale University, USA to work on synthetic organic chemistry in co-operation with Professor K. B. Wiberg. In 1967, Dr. Okano was promoted to a Full Professor of Kyoto University to hold a chair of Laboratory of Petroleum Chemistry in the Institute for Chemical Research.

Dr. Okano retired from Kyoto University on April 1, 1984 and was honored with the title of Professor Emeritus, Kyoto University on the same day. After retirement, Dr. Okano served as the President of Kyoto Polytechnic College (established by Ministry of Labor for the training to get employment) until 1988.

Dr. Okano has shown that kinetic analysis is very effective method to clarify the mechanism of the reactions valuable to synthesize industrially important compounds such as melamine resin and azo dye. He further developed these findings to control the reaction course of reactive carbon species bearing heteroatom such as nitrogen, phosphine, sulfur, or halogens on the carbon atom.

Dr. Okano has opened a new methodology of organic syntheses by the use of inorganic salts. He discovered novel selectivity which was not realized by the traditional methods during halogenation reactions using antimony(V) or molybdenum(V) chlorides. Thus, *cis*-dihalogenated products were produced selectively from olefins and acetylenes and unsymmetrically substituted *para*-dihalogenobenzenes were produced selectively from halogenobenzenes. He also discovered the unique catalytic activity of thallium(III) salts in the conversion of isonitriles to isothiocyanates and carboxylation of aromatic compounds.

Dr. Okano also contributed to establish another new methodology in organic synthesis by the use of organo-metallic and -semimetallic compounds as intermediates. Thus, he succeeded in the isolation of so far unknown organothallium(III) compounds from olefins, acetylenes, and aromatic compounds and clearly showed that carbon-thallium bonds in these compounds were easily cleaved by the reaction with copper salts to introduce halogen atoms or pseudohalogeno groups into the carbon atoms. He also discovered that anchimeric assistance of selenium atom is useful to introduce various functional groups into olefins. This finding was utilized in the selective construction of unique bicyclic ethers and in the convenient procedure to synthesize allylic amides and alcohols.

Due to these excellent achievements, Dr. Okano was prized with Synthetic Organic Chemistry Award, Japan in 1983.

He delivered lectures on stereochemistry and chemistry of reactive intermediates at the Department of Hydrocarbon and Synthetic Chemistry, Graduate School of Kyoto University and was charged with supervising dissertation works of graduate students, during which he trained many doctor candidates.

Dr. Okano's superiority in research and education, deep insight into science and warm hospitality not only have attracted and stimulated many young and talented students but also have won him the respect of many friends and colleagues. He also served as a director or an executive board of scientific societies such as the Society of Synthetic Organic Chemistry, Japan.

For his outstanding professional activities in research, education and academic society, Dr. Okano received the Third Order of Merit with the Order of Rising Sun, Gold Rays with Neck Ribbon from Japanese Government in April, 1995.